IN THE CLAIMS:

1. (Currently Amended) A microlithography method for coating a deep-featured substrate with a uniform thickness of photoresist, comprising:

preparing a mixed solvent based resist from a photoresist solution and a solvent having a higher volatility rate than the photoresist solution, the mixed solvent based resist having a viscosity between about one and about three centipoises;

rotating a substrate having a perimeter and a center at a constant predefined speed;

spraying the mixed solvent based resist through a spray nozzle onto a surface of the substrate at a spray angle to the surface of less than 90 degrees~~; and accelerating the~~ while moving the spray nozzle diametrically across the surface of the substrate ~~to achieve~~ from the perimeter to the center at a speed that increases as the nozzle moves toward the center and decreases as it moves toward the perimeter, thereby coating the deep features of the substrate with a photoresist coat of substantially uniform thickness.

2. (Previously Presented) The method of claim 1 further comprising:

priming the surface of the substrate with a primer to achieve a water contact angle between about forty and about fifty degrees.

3. (Previously Presented) The method of claim 2 wherein the spraying step further comprises spraying in an environment having relative humidity lower than fifty percent.

4. (Previously Presented) The method of claim 1 wherein the photoresist solution is a negative-tone resist solution and wherein the photoresist solution-to-solvent ratio is in a range between about one-to-three and about one-to-five-and-a-half.

5-7. (Canceled)

8. (Previously Presented) The method of claim 1 wherein the photoresist solution is a positive-tone resist solution and wherein the photoresist solution-to-solvent ratio is in a range between about one-to-five and about one-to seven.

9. (Currently Amended) The method of claim 1 wherein the substrate includes deep ~~etched~~ features deeper than 20 μm~~, and wherein the photoresist coat of substantially uniform thickness coats the deep etched features~~ and the spray angle varies with the aspect ratio of the deep features.

10. (Currently Amended) The method of claim 9 wherein the deep ~~etched~~ features are deeper than 200 μm and the spray angle varies with the aspect ratio of the deep features.

11. (Currently Amended) [[A]] The method for coating photoresist ~~on a substrate having deep etched features,~~ of claim 1, further comprising:

immersing the substrate in a cleaning solution;

first rinsing the substrate in ultrapure water;

drying the substrate;

coating the substrate with a primer by immersing it into a priming solution;

second rinsing the substrate in ultrapure water to remove excess priming solution; and

drying the substrate~~; and~~

~~spraying a mixed solvent based resist through a spray nozzle onto a surface of the substrate at a spray angle to the surface of less than 90 degrees~~.

12. (Previously Presented) The method of claim 11 wherein

the cleaning solution ~~of~~ comprises a peroxide-sulfuric solution,

wherein the immersing step is performed for a duration of five to fifteen minutes, and

wherein the first rinsing step is performed for a duration of five to ten minutes.

13. (Previously Presented) The method of claim 11 wherein the deep etched features are deeper than 20 μm, and wherein the mixed solvent based resist achieves a coat of substantially uniform thickness along surfaces of the deep etched features.

14. (Previously Presented) The method of claim 13 wherein the deep etched features are deeper than 200 μm.

15. (Previously Presented) The method of claim 11 wherein the second drying step produces a primed substrate surface having a water contact angle of between about forty and about fifty degrees.

16. (Previously Presented) The method of claim 11 wherein the spraying step further comprises spraying the mixed solvent based resist in an environment having relative humidity lower than fifty percent.

17. (Previously Presented) The method of claim 11 wherein the mixed solvent based resist comprises a negative-tone photoresist solution diluted with a solvent, the negative-tone photoresist solution-to-solvent ratio being in a range between about one-to-three and about one-to-five-and-a-half.

18. (Previously Presented) The method of claim 11 wherein the mixed solvent based resist comprises a positive-tone photoresist solution diluted with a solvent, the positive-tone photoresist solution-to-solvent ratio being in a range between about one-to-five and about one-to-seven.

19. (Previously Presented) The method of claim 1 wherein the solvent comprises methyl-ethyl-ketone.

20. (Previously Presented) The method of claim 4 wherein the negative-tone resist solution is cyclohexanone solvent based.

21. (Previously Presented) The method of claim 8 wherein the positive-tone resist solution is propylene glycol monomethyl ether acetate solvent based.

22. (Currently Amended) A microlithography method for coating a deep-featured substrate surface having a perimeter and a center with a uniform thickness of photoresist, comprising:

applying a primer coat to the substrate surface to create a primed substrate surface having a water contact angle of between about forty and about fifty degrees;

rotating the substrate at a constant predefined speed;

spraying a mixed solvent based resist through a spray nozzle onto the primed surface of the substrate at a spray angle to the primed surface of less than 90 degrees, the mixed solvent based resist having a viscosity between about one and about three centipoises~~; and accelerating~~ while moving the spray nozzle diametrically across the substrate surface ~~to achieve~~ from the perimeter to the center at a speed that increases as the nozzle moves toward the center and decreases as it moves toward the perimeter, thereby coating the deep features in the substrate with a photoresist coat of substantially uniform thickness.

23. (Previously Presented) The method of claim 22 wherein the mixed solvent based resist comprises a photoresist solution and a solvent having a higher volatility rate than the photoresist solution, the photoresist solution-to-solvent ratio being in a range of about one-to-three and about one-to-seven.